

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 12, 2003, 15:26:44 ; Search time 11 Seconds

(Without alignments)
71.641 Million cell updates/sec

Title: US-09-869-540A-2

Perfect score: 113

Sequence: 1 DFDMLKMGKGRYRRCMOY 19

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : SwissProt_40*

Prod. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	113	100.0	165	1	MLCH_HUMAN
2	113	100.0	165	1	MLCH_HUMAN
3	113	100.0	165	1	MLCH_HUMAN
4	89	78.8	78	1	MLC2_MOUSE
5	87	77.0	132	1	MLC1_HUMAN
6	87	77.0	132	1	MLC1_ONCKE
7	87	77.0	132	1	MLC1_ONCKI
8	87	77.0	132	1	MLC1_ONCMY
9	87	77.0	132	1	MLC1_ONCTS
10	87	77.0	132	1	MLC2_ONCKE
11	43.5	38.5	315	1	MLC2_ONCKE
12	43.5	38.5	315	1	MLC2_ONCKE
13	43.5	38.5	315	1	MLC2_ONCKE
14	43.5	38.5	315	1	MLC2_ONCKE
15	43.5	38.5	315	1	MLC2_ONCKE
16	43.5	38.5	315	1	MLC2_ONCKE
17	43.5	38.5	315	1	MLC2_ONCKE
18	43.5	38.5	315	1	MLC2_ONCKE
19	43.5	38.5	315	1	MLC2_ONCKE
20	43.5	38.5	315	1	MLC2_ONCKE
21	43.5	38.5	315	1	MLC2_ONCKE
22	43.5	38.5	315	1	MLC2_ONCKE
23	43.5	38.5	315	1	MLC2_ONCKE
24	43.5	38.5	315	1	MLC2_ONCKE
25	43.5	38.5	315	1	MLC2_ONCKE
26	43.5	38.5	315	1	MLC2_ONCKE
27	43.5	38.5	315	1	MLC2_ONCKE
28	43.5	38.5	315	1	MLC2_ONCKE
29	43.5	38.5	315	1	MLC2_ONCKE
30	43.5	38.5	315	1	MLC2_ONCKE
31	43.5	38.5	315	1	MLC2_ONCKE
32	43.5	38.5	315	1	MLC2_ONCKE
33	43.5	38.5	315	1	MLC2_ONCKE

34	40	35.4	726	1	PRIP_HSV6U
35	40	35.4	850	1	PRIP_HCMVA
36	40	35.4	1705	1	PRIP_MOUSE
37	40	35.4	1711	1	PRIP_RAT
38	40	35.4	3461	1	RELM_MOUSE
39	39.5	35.0	768	1	BAR1_RAT
40	39.5	35.0	777	1	BAR1_HUMAN
41	39.5	35.0	111	1	ORIS_YEAST
42	39	34.5	170	1	HPAC_SALDU
43	39	34.5	170	1	HPAC_SALTI
44	39	34.5	170	1	HPAC_SALTY
45	39	34.5	279	1	NAPG_HAETIN

ALIGNMENTS

RESULT 1
MLCH_HUMAN STANDARD: PRT: 165 AA.
ID MLCH_HUMAN
AC P20382; Q16044;
DT 01-FEB-1991 (Rel. 17, Created)
DT 15-JUL-1999 (Rel. 38, Last sequence update)
DT 15-JUN-2002 (Rel. 41, Last annotation update)
DE PRO-MCH precursor [Contains: Neuropeptide-glycine-glutamic acid (NGE)
DE (Neuropeptide G-E); Neuropeptide-glutamic acid-isoleucine (NEI)
DE (Neuropeptide E-I); Melanin-concentrating hormone (MCH)].
GN PMCH OR MCH
OS Homo sapiens (human)
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Carnivora; Homnidae; Homo.
OC NCBI_TaxID:9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Hypothalamus; PubMed:2149166;
RX MEDLINE-91125371; PubMed-2149166;
RA Presse F., Nahon J.-L., Fischer W.H., Vale W.;
RT Structure of the human melanin concentrating hormone mRNA.*;
RL Mol. Endocrinol. 4:632-637(1990).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE-Breast cancer; PubMed-8326825;
RX MEDLINE-93316802; PubMed-8326825;
RA Breton C., Schopp M., Nahon J.-L.;
RT Isolation and characterization of the human melanin-concentrating
RT hormone gene and a variant gene.*;
RL Brain Res. Mol. Brain Res. 18:297-310(1993).
RN [3]
RP PROCESSING.
RX MEDLINE-99156937; PubMed-10037747;
RA Viale A., Ortolano C., Hervieu G., Furuta M., Barbero P., Steiner D.F.,
RT Celluar localization and role of pro-hormone convertases in the
RT processing of pro-melanin concentrating hormone in mammals.*;
RL J. Biol. Chem. 274:6536-6545(1999).
RN [4]
RP TISSUE SPECIFICITY.
RX MEDLINE-9734402; PubMed-9191099;
RA Viale A., Zhixing Y., Breton C., Peduto F., Coquerel A., Jordan D.,
RT The melanin-concentrating hormone gene in human: flanking region
RT analysis, fine chromosome mapping, and tissue-specific expression.*;
RL Brain Res. Mol. Brain Res. 46:243-255(1997).
RN [5]
RP FUNCTION: MCH may act as a neurotransmitter or neuromodulator in a
RP broad array of neuronal functions directed toward the regulation
RP of goal-directed behavior, such as food intake, and general
RP arousal. May also have a role in spermatocyte differentiation.
RP HYPOTHALAMUS, ALSO DETECTED IN PALLIDIUM, NEOCORTEX AND
RP CEREBELLUM. ALSO FOUND IN THYMUS, BROWN ADIPOSE TISSUE, DUODENUM
RP AND TESTIS (SPERMATOCYTES AND SEROLI CELLS).
RP NO EXPRESSION IN PERIPHERAL BLOOD. IN BRAIN EXCLUSIVELY MATURE MCH
RP AND NEI PEPTIDES ARE PRESENT. IN PERIPHERAL TISSUES A LARGE

RL Peptide 19:1317-1327(1998).

CC -1- FUNCTION: MCH inhibits acth secretion at the end of the light on

CC period which corresponds to the peak of the circadian rhythm in

CC ACTH. Inhibits also stress induced ACTH release during the light

CC off period of the cycle. Involved as a neurotransmitter or

CC neuromodulator in a broad array of neuronal functions. Stimulates

CC sexual behavior when injected into the ventromedial nucleus. This

CC effect is antagonized by NEI. In the medial preoptic area,

CC stimulates anxiety and sexual behavior. Antagonizes inhibitory

CC effect of melatonin alpha on exploration behavior.

CC -1- FUNCTION: NEI CAN INFLUENCE DIFFERENTIATION OF NEURONAL PROCESSES

CC IN BRAIN NEURONS. AFFECTS THE CONTENT OF NEUROFILAMENT PROTEIN IN

CC NEURITOGENESIS (IN VITRO). MAY ALSO BE A NEUROMODULATORY FACTOR.

CC IN BEHAVIORAL TESTS, IT STIMULATES EXPLORATION AND ANXIETY WHEN

CC INJECTED INTO THE VENTROMEDIAL NUCLEUS. ALSO STIMULATES GROOMING,

CC LOCOMOTION AND REARING. MAY ANTAGONIZE THE INHIBITORY EFFECT OF

CC MCH ON ACTH RELEASE. REDUCES DOPAMINE AND DOPAC RELEASE IN THE

CC VENTROMEDIAL NUCLEUS.

CC -1- TISSUE SPECIFICITY: MCH IS PRESENT IN ALL REGIONS OF THE BRAIN AND

CC IN NEUROINTERMEDIATE LOBE OF THE PITUITARY GLAND, WITH HIGHEST

CC CONCENTRATIONS IN THE HYPOTHALAMUS. ALSO EXPRESSED TO A MUCH

CC LESSER EXTENT IN STOMACH, LAMINA PROPRIA OF BOTH DODENUM AND

CC COLON, OVARY, THYMUS, PANCREAS, ADRENAL GLAND AND TESTIS

CC (SPERMATOGENIA, EARLY SPERMATOCYTES AND SERTOLI CELLS). PEAK

CC EXPRESSION IN HEART AND LUNG. THE OTHER PEPTIDES ARE EXPRESSED AT

CC LEAST IN SERTOLI CELLS, NEI BEING ALSO EXPRESSED IN BRAIN, STOMACH

CC AND PROXIMAL DODENUM. IN BRAIN EXCLUSIVELY MATURE MCH AND NEI

CC PEPTIDES ARE PRESENT. IN PERIPHERAL TISSUES A LARGE PRODUCT,

CC ENCOMPASSING THE NEI AND MCH DOMAINS OF THE PRECURSOR, IS FOUND

CC PREDOMINANTLY. AT LOW LEVELS FULLY PROCESSED MCH AND NEI PEPTIDES

CC ARE PRESENT IN GUT. NO EXPRESSION IN PERIPHERAL BLOOD.

CC -1- DEVELOPMENTAL STAGE: EXPRESSION IS STRONGLY INCREASED IN

CC HYPOTHALAMUS BETWEEN POSTNATAL DAYS 12 AND 20, TO REACH HIGH

CC CONSTANT VALUES IN ADULT.

CC -1- INDUCTION: INHIBITED BY NEUROGENIC STRESS OR OSMOTIC STRESS.

CC -1- PTM: PRO-MCH IS PROCESSED DIFFERENTIALLY IN THE BRAIN AND IN

CC PERIPHERAL ORGANS PRODUCING TWO NEUROPEPTIDES: NEI AND MCH. A

CC THIRD PEPTIDE, NGE, MAY ALSO BE PRODUCED. PREFERENTIAL PROCESSING

CC IN NEURONS BY PROHORMONE CONVERTASE 2 (PC2) GENERATES NEI. MCH IS

CC GENERATED IN NEURONS OF THE LATERAL HYPOTHALMIC AREA BY SEVERAL

CC PROHORMONE CONVERTASES INCLUDING PC1/3, PC2 AND PC5/6.

CC -1- PTM: MCH IS A CYCLIC PEPTIDE.

CC -1- SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.

CC -----

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CC -----

DR EMBL: M29712; AAA41580.1; -

DR EMBL: M62641; AAA41581.1; -

DR PIR: A36237; A36237.

DR PIR: A37407; A37407.

KW Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;

KW Amidation.

FT CHAIN 1 21 POTENTIAL.

FT CHAIN 22 166 PRO-MCH.

FT PEPTIDE 110 128 NGE (POTENTIAL).

FT PEPTIDE 131 143 NEI.

FT PEPTIDE 147 165 MELANIN-CONCENTRATING HORMONE.

FT MOD_RES 143 143 AMIDATION (G-144 PROVIDE AMIDE GROUP).

FT DISULFID 153 162 BY SIMILARITY.

SO SEQUENCE 165 AA; 18482 MW; 3859F07693E77A05 CRC64;

Query Match 100.0%; Score 113; DB 1; Length 165;

Best Local Similarity 100.0%; Pred. No. 4.3e-11;

Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1 DFDMLRCMLGRTVRCQOV 19

|||||

Db 147 DFDMLRCMLGRTVRCQOV 165

RESULT 3

MLCH_MOUSE

ID MLCH_MOUSE STANDARD; PRT; 166 AA.

AC P56942;

DT 30-MAY-2000 (Rel. 39, Created)

DT 30-MAY-2000 (Rel. 39, Last sequence update)

DT 15-JUN-2002 (Rel. 41, Last annotation update)

DE Pro-MCH precursor [Contains: Neuropeptide-glycine-glutamic acid (NGE)

DE (Neuropeptide G-E); Neuropeptide-glutamic acid-isoleucine (NEI)

DE (Neuropeptide E-I); Melanin-concentrating hormone (MCH)].

GN PMCH OR MCH.

OS Mus musculus (Mouse).

OC Eukaryota; Metazoa; Chordata; Crustacea; Vertebrata; Euteleostomi;

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

OX NCBI_Taxid=10090.

RN [1]

RP SEQUENCE FROM N.A.

RC STRAIN-BALB/c; TISSUE-Brain;

RA Breton C., Presse F., Hervieu G., Nahon J.-L.;

RT Structure and regulation of the mouse melanin-concentrating hormone

RT mRNA and gene.";

RL Mol. Cell. Neurosci. 4: 271-284(1993).

RN [2]

RP PROCESSING

RX MEDLINE=95156937; PubMed=10037747;

RA Viale A., Ortolano C., Hervieu G., Furuta M., Barbero P., Steiner D.F.,

RA Seidah N.G., Nahon J.-L.;

RT Cellular localization and role of prohormone convertases in the

RT processing of pro-melanin concentrating hormone in mammals.";

RL J. Biol. Chem. 274:6536-6545(1999).

RN [3]

RP TISSUE SPECIFICITY.

RX MEDLINE=96344052; PubMed=8724342;

RA Hervieu G., Segretain D., Nahon J.-L.;

RT Developmental and stage-dependent expression of melanin-concentrating

RT hormone in mammalian germ cells.";

RL Biol. Reprod. 54:1161-1172(1996).

CC -1- FUNCTION: MCH may act as a neurotransmitter or neuromodulator in a

CC broad array of neuronal functions directed toward the regulation

CC of goal-directed behavior, such as food intake, and general

CC arousal (By similarity).

CC -1- TISSUE SPECIFICITY: PREDOMINANTLY EXPRESSED IN HYPOTHALAMUS. ALSO

CC FOUND IN HEART, INTESTINE, SPLEEN AND TESTIS (SPERMATOGENIA, EARLY

CC SPERMATOCYTES AND SERTOLI CELLS). IN BRAIN ONLY MATURE MCH

CC AND NEI PEPTIDES ARE PRESENT. IN PERIPHERAL TISSUES A LARGE

CC PRODUCT, ENCOMPASSING THE NEI AND MCH DOMAINS OF THE PRECURSOR, IS

CC FOUND PREDOMINANTLY.

CC -1- DEVELOPMENTAL STAGE: EXPRESSION IS ENHANCED BETWEEN POSTNATAL DAYS

CC 10 AND 15.

CC -1- PTM: PRO-MCH IS PROCESSED DIFFERENTIALLY IN THE BRAIN AND IN

CC PERIPHERAL ORGANS PRODUCING TWO NEUROPEPTIDES: NEI AND MCH. A

CC THIRD PEPTIDE, NGE, MAY ALSO BE PRODUCED. PREFERENTIAL PROCESSING

CC IN NEURONS BY PROHORMONE CONVERTASE 2 (PC2) GENERATES NEI. MCH IS

CC GENERATED IN NEURONS OF THE LATERAL HYPOTHALMIC AREA BY SEVERAL

CC PROHORMONE CONVERTASES INCLUDING PC1/3, PC2 AND PC5/6.

CC -1- PTM: MCH IS A CYCLIC PEPTIDE.

CC -1- SIMILARITY: BELONGS TO THE MCH FAMILY.

CC -1- SIMILARITY: BELONGS TO THE MCH FAMILY.

KW Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;

KW Amidation.

FT CHAIN 1 21 POTENTIAL.

FT CHAIN 22 166 PRO-MCH.

FT PEPTIDE 110 129 NGE (POTENTIAL).

FT PEPTIDE 132 144 NEI (BY SIMILARITY).

FT PEPTIDE 148 166 MELANIN-CONCENTRATING HORMONE.

FT MOD_RES 144 144 AMIDATION (G-145 PROVIDE AMIDE GROUP)

FT DISULFID 154 163 BY SIMILARITY.

SO SEQUENCE 166 AA; 18645 MW; 13D10268666C6A0D CRC64;

Query Match 100.0%; Score 113; DB 1; Length 166;
 Best Local Similarity 100.0%; Pred. No. 4,4e-11;
 Matches 19; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

DB 148 DFDMLKMLGRRYRPMQOV 166

RESULT 4

MIC2_HUMAN STANDARD; PRT; 78 AA.
 AC Q16048;
 DT 15-JUL-1999 (Rel. 38, Created)
 DT 15-JUL-1999 (Rel. 38, Last sequence update)
 DT 15-JUN-2002 (Rel. 41, Last annotation update)
 DE PRO-MCH variant (Fragment).
 GN PMCHL1.
 OS Homo sapiens (human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Carnivora; Hominoidea; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=93318802; PubMed=8326825;
 RT Breton C., Schorpp M., Nahon J.-L.;
 RT Isolation and characterization of the human melanin-concentrating
 RT hormone gene and a variant gene.*
 RT Brain Res. Mol. Brain Res. 18:297-310(1993).
 RN [2]
 RP EXPRESSION.
 RX MEDLINE=96396385; PubMed=9729295;
 RX Miller C.L., Bumester M., Thompson R.C.;
 RT Antisense expression of the human pro-melanin-concentrating hormone
 RT genes.*
 RT Brain Res. 893:86-94(1998).
 CC -1- SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.
 CC -1- CAUTION: PMCHL1 mRNA MAY NOT BE USED AS TEMPLATE FOR TRANSLATION.
 CC ACCORDING TO REF. 2 ONLY ANTISENSE PMCHL1 TRANSCRIPTS ARE PRESENT
 CC IN BRAIN.

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CC EMBL: S64288; AAB27494.1;
 CC DR GeneW; HGNC:9110; PMCHL1.
 CC DR MIM: 176793;
 CC PT NON_TER 1
 CC FT DOMAIN 23
 CC FT DOMAIN 44
 CC FT DOMAIN 56
 CC FT DOMAIN 60
 CC FT SEQUENCE 78 AA; 8774 MW; 52826A25D21355 CRC64;
 CC

Query Match 78.8%; Score 89; DB 1; Length 76;
 Best Local Similarity 78.9%; Pred. No. 1.5e-07;
 Matches 15; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

DB 60 DFDMLKMLGRRYRPMQOV 19

RESULT 5
 MIC1_ONCKE STANDARD; PRT; 132 AA.
 AC P19713; P01208;
 DT 01-FEB-1991 (Rel. 17, Created)

DT 01-FEB-1991 (Rel. 17, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE PRO-MCH 1 precursor [contains: Neuropeptide-glutamic acid-valine (NEV)
 DE (Neuropeptide E-V); Melanin-concentrating hormone (MCH)].
 GN PMCHL1.
 OS Oncorhynchus keta (Chum salmon).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 OC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 OX NCBI_TaxID=8018;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=90006787; PubMed=2792771;
 RX Takayama Y., Wada C., Kawachi H., Ono M.;
 RT Structures of two genes coding for melanin-concentrating hormone of
 RT chum salmon.*
 RT Gene 80:65-73(1989).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=89138019; PubMed=2465207;
 RX Ono M., Wada C., Okawa I., Kawachi H.;
 RT Structures of two kinds of mRNA encoding the chum salmon melanin-
 RT concentrating hormone.*
 RT Gene 71:433-438(1988).
 RN [3]
 RP SEQUENCE OF 116-132.
 RX MEDLINE=84014069; PubMed=6621686;
 RX Kawachi H., Kawachi H., Tsukakawa M., Kishida M., Baker B.I.;
 RT Characterization of melanin-concentrating hormone in chum salmon
 RT pituitaries.*
 RT Nature 305:321-323(1983).
 RN [4]
 RP FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE
 CC ACTION OF MELANOTROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN
 CC THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE
 CC HYPOTHALAMO-PITUITARY ADRENAL AXIS BY INHIBITING THE RELEASE
 CC OF ACTH.

CC -1- TISSUE SPECIFICITY: PITUITARY GLAND. PRODUCED IN NEURONS OF
 CC LATERAL BASAL HYPOTHALAMUS WHICH PROJECT BOTH TO THE BRAIN AND TO
 CC THE NEURAL LOBE OF THE PITUITARY GLAND FROM WHERE MCH IS RELEASED.
 CC -1- SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.
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 CC or send an email to license@isb-sib.ch).

CC EMBL: M27872; AAA9418.1;
 CC DR EMBL; M23573; AAA9420.1;
 CC DR PIR: J50282; MTOMK.
 CC KW Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;
 CC MW Multigene family.
 CC FT SIGNAL 1
 CC FT CHAIN 24
 CC FT PEPTIDE 101
 CC FT PEPTIDE 113
 CC FT PEPTIDE 116
 CC FT DISULFID 120
 CC FT CONFLICT 4
 CC FT SEQUENCE 132 AA; 14682 MW; CE9CF95292498738 CRC64;
 CC

Query Match 77.0%; Score 87; DB 1; Length 132;
 Best Local Similarity 76.5%; Pred. No. 4.9e-07;
 Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

DB 116 DFMRCMGRYRPMQOV 19

RESULT 6
 MIC1_ONCKE

ID	NCBI_ONCKI	STANDARD;	PRT;	132 AA.
TD	NCBI_ONCKI	STANDARD;	PRT;	132 AA.
DT	30-MAY-2000 (Rel. 39, Last sequence update)			
DT	10-MAY-2000 (Rel. 39, Last sequence update)			
DT	16-OCT-2001 (Rel. 40, Last annotation update)			
DE	Pro-MCH 1 precursor [Contains: Neuropeptide-glutamic acid-valine (NEV)			
DE	(Neuropeptide E-V); Melanin-concentrating hormone (MCH)]			
GN	MCH1.			
OS	Oncorhynchus kisutch (Coho salmon).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Actinopterygii; Neopterygii; Teleostei; Euteleostei.			
OC	Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.			
OX	NCBI_TaxID=8019;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RA	Nelson J.-L., Presse F., Scheepfer R., Vale W.:			
RT	"Identification of a single melanin-concentrating hormone messenger			
RT	ribonucleic acid in Coho salmon: structural relatedness with			
RT	ribonucleic acid."			
RL	J. Neuroendocrinol. 3:173-183(1991).			
CC	-1- FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE			
CC	ACTION OF MELANOTROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN			
CC	THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE			
CC	HYPOTHALAMO-PITUITARY ADRENAL GLAND AXIS BY INHIBITING THE RELEASE			
CC	OF ACTH.			
CC	-1- TISSUE SPECIFICITY: PITUITARY GLAND. PRODUCED IN NEURONS OF			
CC	LATERAL BASAL HYPOTHALAMUS WHICH PROJECT BOTH TO THE BRAIN AND TO			
CC	THE NEURAL LOBE OF THE PITUITARY GLAND FROM WHERE MCH IS RELEASED.			
CC	-1- SIMILARITY: BELONGS TO THE MCH FAMILY.			
RW	Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;			
RW	Multigene family.			
FT	FT SIGNAL	24	POTENTIAL.	
FT	CHAIN	25	PRO-MCH 1.	
FT	PEPTIDE	101	NEV (POTENTIAL).	
FT	PEPTIDE	116	MELANIN-CONCENTRATING HORMONE.	
FT	DISULFID	120	BY SIMILARITY.	
FT	DOMAIN	86	POLY-ALA.	
SO	SEQUENCE	132 AA;	14668 MW;	8B9348336BB1A8 CRC64;
Query Match		77.08;	Score 87;	DB 1;
Best Local Similarity		76.58;	Prod. No. 4.9e-07;	Length 132;
Matches	13;	Conservative	3;	Mismatches 1;
				Indels 0;
				Gaps
OY	3 DMLRCMLGRVYRPMQOV 19			
DB	116 DMLRCMLGRVYRPMQOV 132			
NCBI_ONCKY	STANDARD;	PRT;	132 AA.	
DT	01-FEB-1994 (Rel. 28, Created)			
DT	01-FEB-1994 (Rel. 28, Last sequence update)			
DT	16-OCT-2001 (Rel. 40, Last annotation update)			
DE	Pro-MCH 1 precursor [Contains: Neuropeptide-glutamic acid-valine (NEV)			
DE	(Neuropeptide E-V); Melanin-concentrating hormone (MCH)]			
GN	MCH1.			
OS	Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).			
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;			
OC	Actinopterygii; Neopterygii; Teleostei; Euteleostei.			
OC	Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.			
OX	NCBI_TaxID=8022;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=95249052; PubMed=7731499;			
RA	Baker B., Levy A., Hall L., Lightman S.;			
RT	"Cloning and expression of melanin-concentrating hormone genes in the			
RT	Rainbow trout brain."			
RL	J. Neuroendocrinology 61:67-76(1995).			
CC	-1- FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE			
CC	ACTION OF MELANOTROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN			
CC	THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE			

```
CC CC      HYPOPHALAMUS-PITUITARY ADRENAL GLAND AXIS BY INHIBITING THE RELEASE  
CC OF ACTH.  
CC - TISSUE SPECIFICITY: PITUITARY GLAND. PRODUCED IN NEURONS OF  
CC LATERAL BASAL HYPOTHALAMUS WHICH PROJECT BOTH TO THE BRAIN AND TO  
CC THE NERVAL LOBE OF THE PITUITARY GLAND FROM WHERE MCH IS RELEASED.  
CC - SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.  
-----  
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CC or send an email to license@isb-sib.ch).  
-----  
DR DR    EMBL: X73837; CAA52059.1; .  
RW RW    PIR: S34653; S34653.  
RM RM    Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;  
KW KW    Multigene family.  
FT FT    SIGNAL.                24          BY SIMILARITY.  
FT FT    CHAIN                 1           PRO-MCH 1.  
FT FT    PEPTIDE              101        NEW (POTENTIAL).  
FT FT    PEPTIDE             116         MELANIN-CONCENTRATING HORMONE.  
FT FT    DISULFID             120         BY SIMILARITY.  
SQ SQ    SEQUENCE            132 AA; 14608 MW; ADFB644E1AC6FD99 CRC64;  
  
Query Match               77.0%; Score 87; DB 1; Length 132;  
Best Local Similarity   76.5%; Prod. No 4.9e+07;  
Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;  
  
Oy      3 DMLRCMGLGRTVPCWQV 19  
Db      116 DTMRGMVGRTVPCWEV 132  
       1 : ::::|::::|::|::|:  
RESULT 8  
MCL1_ONCTS  
ID MCL1_ONCTS STANDARD; PTR; 132 AA.  
AC PI7640;  
DT 01-AUG-1990 (Rel. 15 Created)  
DT 01-AUG-1990 (Rel. 15 Last sequence update)  
DT 16-OCT-2001 (Rel. 40 Last annotation update)  
DE PRO-MCH 1 Precursor [Contains: Neuropeptide-glutamic acid-valine (NEV)  
DE (Neuropeptide E-V); Melanin-concentrating hormone (MCH)].  
GN MCH1.  
OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon).  
OC Eukaryotes; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
OC Actinopterygii; Neopterygii; Teleostei; Euteleostei.  
OC Proctanthophoridae; Salmoniformes; Salmonidae; Oncorhynchus.  
OX NCBI_TaxID=74940;  
PI [1]  
RA MEDLINE=89264605; PubMed=2471200;  
RA Minich C.A., Qiu H., Akil H., Watson S.J., Dixon J.E.;  
RT "Two precursors of melanin-concentrating hormone: DNA sequence  
RT analysis and in situ immunohistochemical localization.";  
RL Proc. Natl. Acad. Sci. U.S.A. 86:4392-4396(1989).  
-I FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE  
CC ACTION OF MELANOROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN  
CC THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE  
CC HYPOTHALAMO-PITUITARY ADRENAL GLAND AXIS BY INHIBITING THE RELEASE  
CC OF ACTH.  
CC - TISSUE SPECIFICITY: PITUITARY GLAND. PRODUCED IN NEURONS OF  
CC LATERAL BASAL HYPOTHALAMUS WHICH PROJECT BOTH TO THE BRAIN AND TO  
CC THE NERVAL LOBE OF THE PITUITARY GLAND FROM WHERE MCH IS RELEASED.  
CC - SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.  
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CC EMBL: M25755; AAA49423.1; .
 DR PIR: B32910; B32910.
 DR Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;
 KM Multigene family.
 FT SIGNAL 1 24
 FT CHAIN 25 132 PRO-MCH 1.
 FT PEPTIDE 101 113 NEV (POTENTIAL).
 FT PEPTIDE 116 132 MELANIN-CONCENTRATING HORMONE.
 FT DISULFID 120 129
 SQ SEQUENCE 132 AA; 14657 MW; F2065B83AFAB46E5 CRC64;

Query Match 77.0%; Score 87; DB 1; Length 132;
 Best Local Similarity 76.5%; Pred. No. 4,9e-07;
 Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 3 DMLRCMLGRVYRPMQOV 19
 116 DTMKCMVGRVYRPMQEV 132

RESULT 9
 MICH2_ONCKE STANDARD; PRT; 132 AA.
 AC P19714; P01208.
 DT 21-OCT-1986 (Rel. 01, Created)
 DT 01-OCT-1989 (Rel. 11, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE PRO-MCH 2 precursor [Contains: Neuropeptide-glutamic acid-valine (NEV) (Neuropeptide E-V); Melanin-concentrating hormone (MCH)].
 GN MCH2.
 OS Oncorhynchus keta (Chum salmon) (King salmon), and
 OS Oncorhynchus tshawytscha (Chinook salmon) (King salmon), and
 OS Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei;
 CC Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
 OC NCBI_TaxID=8018, 74940, 8022;
 RX PIR: A32910; A32910.
 DR PIR: S04087; S04087.
 DR PIR: S34654; S34654.
 DR PIR: S34654; S34654.
 KM Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;
 KW Multigene family.
 FT SIGNAL 1 24
 FT CHAIN 25 132 PRO-MCH 2.
 FT PEPTIDE 101 113 NEV (POTENTIAL).
 FT PEPTIDE 116 132 MELANIN-CONCENTRATING HORMONE.
 FT DISULFID 120 129
 FT CONFLICT 107 108 SP -> NS (IN REF. 2).
 FT CONFLICT 107 107 S -> N (IN REF. 3).
 SQ SEQUENCE 132 AA; 14710 MW; AA555F456EA2FE4 CRC64;

Query Match 77.0%; Score 87; DB 1; Length 132;
 Best Local Similarity 76.5%; Pred. No. 4,9e-07;
 Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 3 DMLRCMLGRVYRPMQOV 19
 116 DTMKCMVGRVYRPMQEV 132

RESULT 10
 MICH2_ONCKE STANDARD; PRT; 136 AA.
 AC P49794.
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE PRO-MCH precursor [Contains: Melanin-concentrating hormone (MCH)].
 OS Oreochromis mossambicus (Mozambique tilapia) (Tilapia mossambica).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 CC Acanthomorpha; Acanthopterygii; Perciformes; Perciformes; Labroidae;

SPECIES-O.MYKISS; PubMed-7731499;
 RX Baker B., Levy A., Hall L., Lightman S.;
 RA MEDLINE-95249052; PubMed-7731499;
 RT Cloning and expression of melanin-concentrating hormone genes in the
 RT rainbow trout brain.
 RL Neuroendocrinology 61:67-76(1995).
 [6]
 RP SEQUENCE OF 116-132.
 RC SPECIES-O.keta;
 RX MEDLINE-84014069; PubMed-6621686;
 RA Kawauchi H., Kawazoe I., Tsubokawa M., Kishida M., Baker B.I.;
 RT Characterization of melanin-concentrating hormone in chum salmon
 RT pituitaries.
 RL Nature 305:321-323(1983).
 CC -1- FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE
 CC ACTION OF MELANOTROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN
 CC THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE
 CC HYPOTHALAMO-PITUITARY ADRENAL GLAND AXIS BY INHIBITING THE RELEASE
 CC OF ACTH.
 CC -1- TISSUE SPECIFICITY: PITUITARY GLAND. PRODUCED IN NEURONS OF
 CC LATERAL BASAL HYPOTHALAMUS WHICH PROJECT BOTH TO THE BRAIN AND TO
 CC THE NEURAL LOBE OF THE PITUITARY GLAND FROM WHERE MCH IS RELEASED.
 CC -1- SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.
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 CC -----
 DR EMBL: X13685; CAA31978.1; .
 DR EMBL: M25754; AAA49421.1; .
 DR EMBL: M27871; AAA49419.1; .
 DR EMBL: M25754; AAA49422.1; .
 DR EMBL: X73838; CAA52060.1; .
 DR PIR: JS0283; MTQNZK.
 DR PIR: A32910; A32910.
 DR PIR: S04087; S04087.
 DR PIR: S34654; S34654.
 KM Cleavage on pair of basic residues; Hormone; Neuropeptide; Signal;
 KW Multigene family.
 FT SIGNAL 1 24
 FT CHAIN 25 132 PRO-MCH 2.
 FT PEPTIDE 101 113 NEV (POTENTIAL).
 FT PEPTIDE 116 132 MELANIN-CONCENTRATING HORMONE.
 FT DISULFID 120 129
 FT CONFLICT 107 108 SP -> NS (IN REF. 2).
 FT CONFLICT 107 107 S -> N (IN REF. 3).
 SQ SEQUENCE 132 AA; 14710 MW; AA555F456EA2FE4 CRC64;

Query Match 77.0%; Score 87; DB 1; Length 132;
 Best Local Similarity 76.5%; Pred. No. 4,9e-07;
 Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;

QY 3 DMLRCMLGRVYRPMQOV 19
 116 DTMKCMVGRVYRPMQEV 132

RESULT 10
 MICH2_ONCKE STANDARD; PRT; 136 AA.
 AC P49794.
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE PRO-MCH precursor [Contains: Melanin-concentrating hormone (MCH)].
 OS Oreochromis mossambicus (Mozambique tilapia) (Tilapia mossambica).
 CC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
 CC Acanthomorpha; Acanthopterygii; Perciformes; Perciformes; Labroidae;

CC Cichlidae; Oreochromis.
 OX NCBI_TaxID-8127;
 RN (1)
 RC SEQUENCE FROM N.A.
 RP TISSUE-Hypothalamus;
 RA Greenwald D., Hut M.J., Balm P.H.M., Martens G.J.M.,
 RA Wengelaar Bonga S.E.;
 RT "Cloning and sequence analysis of hypothalamus cDNA encoding tilapia
 melanin-concentrating hormone";
 RL Fish Physiol. Biochem. 11:117-124(1993).
 CC -1- FUNCTION: PLAYS A ROLE IN SKIN PIGMENTATION BY ANTAGONIZING THE
 ACTION OF MELANOTROPIN ALPHA. INDUCES MELANIN CONCENTRATION WITHIN
 THE MELANOPHORES. MAY PARTICIPATE IN THE CONTROL OF THE
 HYPOTHALAMO-PITUITARY ADRENAL GLAND AXIS BY INHIBITING THE RELEASE
 OF ACTH.
 CC -1- SIMILARITY: BELONGS TO THE MELANIN-CONCENTRATING HORMONE FAMILY.
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 or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: X81144; CAAS7050.1;
 KM Cleavage on pair of basic residues: Hormone; Neuropeptide; Signal.
 FT SIGNAL
 FT CHAIN 1 20
 FT PEPTIDE 21 136 PRO-MCH.
 FT DISULFID 124 133 MELANIN-CONCENTRATING HORMONE.
 SQ SEQUENCE 136 AA; 15410 MW; 91EA3AE3B91500DD CRC64;
 Query Match 77.0%; Score 87; DB 1; Length 136;
 Best Local Similarity 76.5%; Pred. No. 5e-07;
 Matches 13; Conservative 3; Mismatches 1; Indels 0; Gaps 0;
 OY 3 DMLRCMGRYRRCMOY 19
 DB 120 DTMRCMGRYRRCMEY 136
 ID ISTA_SHISO STANDARD; PRT; 315 AA.
 AC P16944;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-AUG-1990 (Rel. 15, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Transposase for insertion sequence element IS640.
 GN ISTA.
 OS Shigella sonnei.
 OC Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae;
 OC Shigella.
 OX NCBI_TaxID-624;
 RN (1)
 RC SEQUENCE FROM N.A.
 RP MEDLINE-88062885; PubMed-2824781;
 RA Matsumi S., Ohtsuda H., Maeda Y., Ohtsuda E.;
 RT "Isolation and characterization of IS elements repeated in the
 bacterial chromosome";
 RL J. Mol. Biol. 196:445-455(1987).
 CC -1- FUNCTION: INVOLVED IN THE TRANSPOSITION OF THE INSERTION
 SEQUENCE.
 CC -1- SIMILARITY: BELONGS TO THE IS2/IS408/IS1162 FAMILY OF
 TRANSPOSASES.
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 CC -----
 DR EMBL: X05956; CAAS9390.1;
 DR PIR: S03416; S03416.
 DR InterPro: IPR001584; Rve.
 DR Pfam: PF00665; rve.1.
 KM Transposable element; Transposon; DNA-binding; DNA recombination.
 SQ SEQUENCE 315 AA; 37544 MW; DB92FEC677DD1D42 CRC64;
 Query Match 38.5%; Score 43.5; DB 1; Length 315;
 Best Local Similarity 42.1%; Pred. No. 8.9;
 Matches 8; Conservative 5; Mismatches 3; Indels 3; Gaps 1;
 OY 2 EDMLR--CMGRYRRCMOY 17
 DB 297 YOLLRYPVCVLCOLYRGW 315
 ID S6AA_HUMAN STANDARD; PRT; 426 AA.
 AC P53796;
 DT 01-OCT-1996 (Rel. 34, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Sodium- and chloride-dependent creatine transporter 2 (CT2)
 DE (Fragment).
 GN SLC6A10.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Placental; Catarrhini; Homnidae; Homo.
 OX NCBI_TaxID-9606;
 RN (1)
 RC SEQUENCE FROM N.A.
 RP MEDLINE-96299673; PubMed-8661037;
 RA Iyer G.S., Krahe R., Goodwin L.A., Doggett N.A., Siciliano M.J.,
 RA Fumagalli V.L., Proujansky R.;
 RT "Identification of a testis-expressed creatine transporter gene at
 16p11.2 and confirmation of the X-linked locus to Xq28.";
 RL Genomics 34:143-146(1996).
 CC -1- FUNCTION: REQUIRED FOR THE UPTAKE OF CREATINE. MAY BE CRITICAL FOR
 CREATINE TRANSPORT INTO SPERMATOZOA AND SPERM MOTILITY FOR THE
 SPERM LACKING AN X CHROMOSOME AFTER MEIOSIS.
 CC -1- SUBCELLULAR LOCATION: Integral membrane protein.
 CC -1- TISSUE SPECIFICITY: TESTIS.
 CC -1- SIMILARITY: BELONGS TO THE SODIUM-NEUROTRANSMITTER SYMPORTER
 FAMILY (SNF).
 CC -----
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 CC -----
 DR EMBL: U41163; AAA96028.1;
 DR Genes: HGNC:11043; SLC6A10.
 DR MIM: 601294;
 DR InterPro: IPR00175; Na/nttran_symport.
 DR Pfam: PF00209; SNF.1.
 DR ProDom: PD000448; Na/nttran_symport.1.
 DR PROSITE: PS00610; NA_NEUTROTRAN_SYM_1; PARTIAL.
 DR PROSITE: PS00754; NA_NEUTROTRAN_SYM_2; PARTIAL.
 DR PROSITE: PS0267; NA_NEUTROTRAN_SYM_3.1.
 KM Neurotransmitter transport; Transport; Transmembrane; Glycoprotein;
 Symport.
 FT NON_TER 1 1
 FT TRANSMEM <1 18 5 (POTENTIAL).
 FT TRANSMEM 54 71 6 (POTENTIAL).
 FT TRANSMEM 83 104 7 (POTENTIAL).
 FT TRANSMEM 137 156 8 (POTENTIAL).
 FT TRANSMEM 186 204 9 (POTENTIAL).

FT TRANSMEM 221 241 10 (POTENTIAL).
 FT TRANSMEM 262 281 11 (POTENTIAL).
 FT TRANSMEM 301 319 12 (POTENTIAL).
 FT DOMAIN 320 426 CYTOPLASMIC (POTENTIAL).
 SO SEQUENCE 426 AA; 47394 MW; AB5003CC3B07FE3 CRC64;
 Query Match 38.5%; Score 43.5; DB 1; Length 426;
 Best Local Similarity 56.2%; Pred. No. 12;
 Matches 9; Conservative 2; Mismatches 2; Indels 3; Gaps 2;
 DB 3 DMLRCMIG-GRYRRC-W 17
 1: 11:1 1111
 246 DDACMIG-TRPCPW 259
 RESULT 13
 ID S6A8_HUMAN STANDARD; PRT: 635 AA.
 AC P48029;
 DT 01-FEB-1996 (Rel. 33, Created)
 DT 01-FEB-1996 (Rel. 33, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Sodium- and chloride-dependent creatine transporter 1 (CT1).
 GN SLC6A8.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Kidney;
 RX MEDLINE=95041864; PubMed=7953292;
 RA Nash S.R., Gilroy B., Kingmore S.F., Rochelle J.M., Suter S.T.,
 RA Gregor P., Seidlin M.F., Caron M.G.;
 RT Cloning, pharmacological characterization, and genomic localization
 RT of the human creatine transporter.
 RT Recept. Channels 2:165-174(1994).
 RN [2]
 RP SEQUENCE FROM N.A.
 RA Eichler E.E., Lu F., Shen Y., Muzny D.M., Gibbs R.A., Nelson D.L.;
 RT "Genomic organization of the human creatine transporter and CDM
 RT genes".
 RT Submitted (SEP-1995) to the EMBL/GenBank/DBJ databases.
 RN [3]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Brain;
 RX MEDLINE=95032129; PubMed=7945388;
 RA Sora I., Richman J., Santoro G., Wei H., Wang Y., Vanderah T.,
 RA Horvath R., Nguyen M., Waite S., Koebeke W.R.;
 RT "The cloning and expression of a human creatine transporter".
 RT Biochem. Biophys. Res. Commun. 204:419-427(1994).
 RN [4]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=96299791; PubMed=8661155;
 RA Sandoval N., Bauer D., Brenner V., Coy J.F., Drescher B.,
 RA Kioschke P., Korn B., Nyakatura G., Rousset A., Reichwald K.,
 RA Rosenthal A., Platzer M.;
 RT "The genomic organization of a human creatine transporter (CRTR) gene
 RT located in Xq28".
 RT Genomics 35:383-385(1996).
 RN [5]
 RP SEQUENCE FROM N.A.
 RC TISSUE=Bye;
 RX Strausberg R.;
 RL Submitted (AUG-2001) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: REQUIRED FOR THE UPTAKE OF CREATINE.
 CC -1- SUBCELLULAR LOCATION: Integral membrane protein.
 CC -1- SIMILARITY: BELONGS TO THE SODIUM:NEUROTRANSMITTER SYMPORTER
 CC FAMILY (SNP).
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 CC -----
 DR EMBL: L31409; AAC1688.1; -
 DR EMBL: U36341; AAA79507.1; -
 DR EMBL: S74039; AA532284.1; -
 DR EMBL: U52111; AAC51739.1; -
 DR EMBL: U66359; CA931442.1; -
 DR EMBL: BC012355; AAH12355.1; -
 DR Genew: HGNC:11055; SLC6A8.
 DR MIM: 300036; -
 DR Interpro: IPR000175; Na/nttran_symport.
 DR Pfam: PF0209; SNF; 1.
 DR PRINTS: PR00176; NANEUSMPORT.
 DR PRODOM: PD000448; Na/nttran_symport; 1.
 DR PROSITE: PS00610; NA_NEUTROTRAN_SYM_1; 1.
 DR PROSITE: PS00754; NA_NEUTROTRAN_SYM_2; 1.
 DR PROSITE: PS0267; NA_NEUTROTRAN_SYM_3; 1.
 KW Neurotransmitter transport; transport; Transmembrane; Glycoprotein;
 FT DOMAIN 1 60 CYTOPLASMIC (POTENTIAL).
 FT TRANSMEM 61 81 1 (POTENTIAL).
 FT TRANSMEM 89 108 2 (POTENTIAL).
 FT TRANSMEM 132 152 3 (POTENTIAL).
 FT DOMAIN 153 232 EXTRACELLULAR (POTENTIAL).
 FT TRANSMEM 233 251 4 (POTENTIAL).
 FT TRANSMEM 260 277 5 (POTENTIAL).
 FT TRANSMEM 313 330 6 (POTENTIAL).
 FT TRANSMEM 342 363 7 (POTENTIAL).
 FT TRANSMEM 396 415 8 (POTENTIAL).
 FT TRANSMEM 445 463 9 (POTENTIAL).
 FT TRANSMEM 480 500 10 (POTENTIAL).
 FT TRANSMEM 521 548 11 (POTENTIAL).
 FT TRANSMEM 560 578 12 (POTENTIAL).
 FT DOMAIN 579 635 CYTOPLASMIC (POTENTIAL).
 FT CARBOHYD 192 192 N-LINKED (GLCNAC. .) (POTENTIAL).
 FT CARBOHYD 197 197 N-LINKED (GLCNAC. .) (POTENTIAL).
 FT CARBOHYD 197 197 AP -> VS (IN REF. 3).
 FT CONFLICT 24 25 A -> S (IN REF. 3).
 FT CONFLICT 32 32 V -> A (IN REF. 3).
 FT CONFLICT 36 38 T -> A (IN REF. 3).
 FT CONFLICT 42 42 GG -> SS (IN REF. 3).
 FT CONFLICT 44 45 A -> D (IN REF. 3).
 FT CONFLICT 193 193 G -> T (IN REF. 3).
 FT CONFLICT 223 223 A -> P (IN REF. 1).
 FT CONFLICT 285 285 A -> T (IN REF. 3).
 FT CONFLICT 368 368
 SQ SEQUENCE 635 AA; 70522 MW; 9FAFE10B2A5B845 CRC64;
 Query Match 38.5%; Score 43.5; DB 1; Length 635;
 Best Local Similarity 56.2%; Pred. No. 17;
 Matches 9; Conservative 2; Mismatches 2; Indels 3; Gaps 2;
 DB 3 DMLRCMIG-GRYRRC-W 17
 1: 11:1 1111
 505 DDACMIG-TRPCPW 518
 RESULT 14
 ID S6A8_RABIT STANDARD; PRT: 635 AA.
 AC P31661;
 DT 01-JUL-1993 (Rel. 26, Created)
 DT 01-JUL-1993 (Rel. 26, Last sequence update)
 DT 16-OCT-2001 (Rel. 40, Last annotation update)
 DE Sodium- and chloride-dependent creatine transporter 1 (CT1).
 GN SLC6A8.
 OS Cynolagus cuniculus (Rabbit).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
 OX NCBI_TaxID=9986;
 RN [1]

